

STEREO AMPLIFIER

SA-5500II

OPERATING INSTRUCTIONS

KC
KU



WARNING: TO PREVENT FIRE OR SHOCK HAZARD,
DO NOT EXPOSE THIS APPLIANCE TO RAIN OR
MOISTURE.

 PIONEER®

FEATURES

Plenty of Power at Low Distortion

Pioneer's original newly developed monolithic power IC is employed which composes a differential input SEPP OCL circuit in the power amplifier section. Ample power and low distortion stable stereo reproduction are assured.

Reliable Protection Circuit

Current limiter and thermal shutdown circuits are combined in the protection circuit. Speakers and power IC are protected from shorts due to faulty speaker connections or other causes. A muting circuit is also included which blocks surge noise when the power switch is operated on-off.

High Stability Direct Coupled Equalizer

Stringently selected PNP and NPN transistors are used in a direct coupled circuit in the phono equalizer. Frequency deviation governing record playback is held to within ± 0.5 dB. This design also achieves improved stability at low frequencies and advanced SN ratio.

Compatible with All Program Sources

In addition to special jacks for turntable and tape deck, auxiliary (AUX) input jacks are provided for connecting a cartridge tape player or other component. Virtually all program sources can be connected.

2 Sets of Speaker Systems Can Be Used

The speaker switch can be used to select between two sets of stereo speaker systems. A-B comparison listening or simultaneous listening with speakers installed in another room become possible. A single SA-5500II functions as two stereo amplifiers in this manner.

Designed for Convenient Operation

Center point click stops are provided for tone and balance controls, while the main volume control uses a 41 click stop system. Ease of operation is given full consideration in the design.

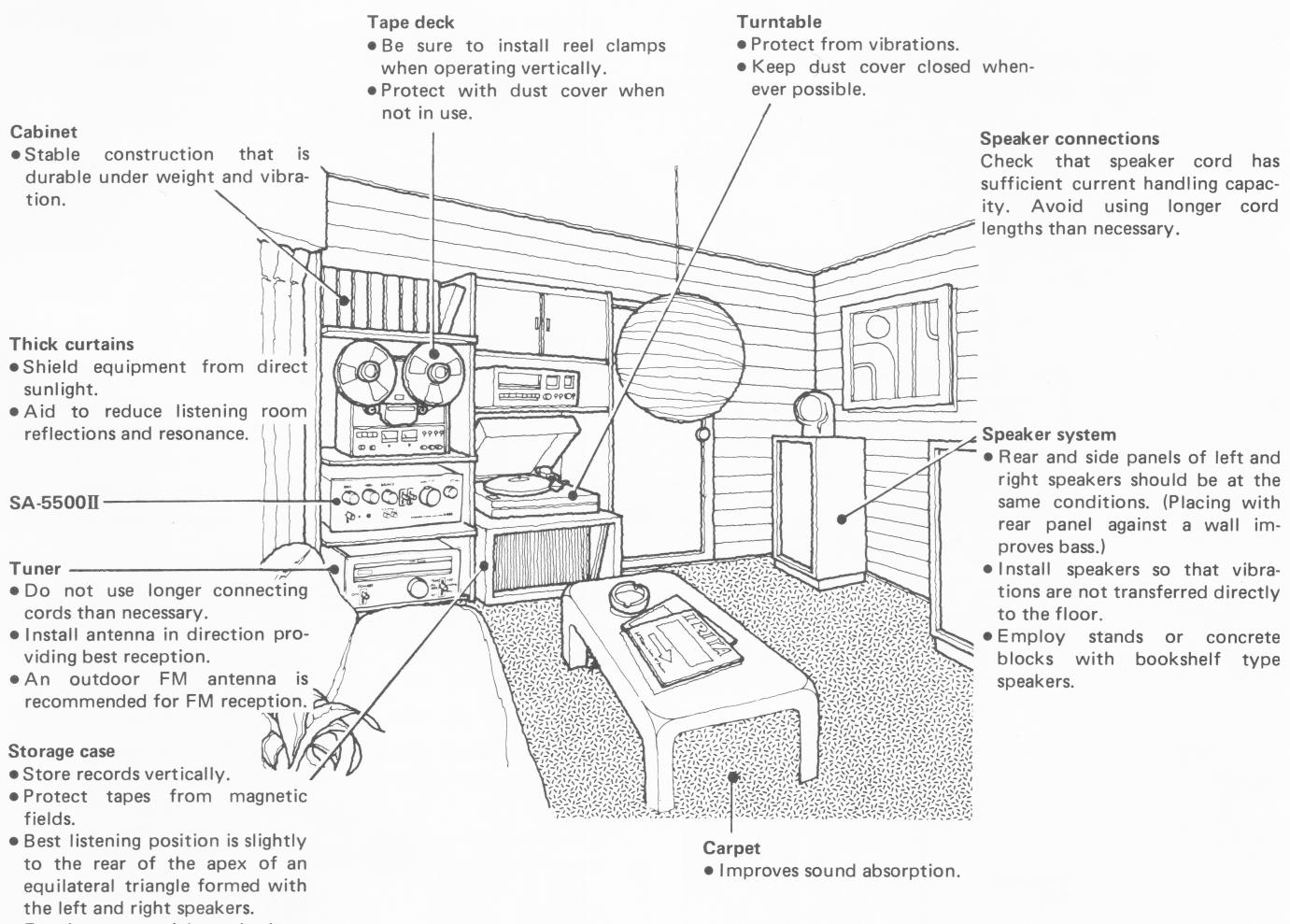
Clean and Simple Styling

Front panel layout is designed for both eye pleasing simplicity and operational convenience. Since a matching stereo tuner is also available, a high quality easily operated stereo system can be set up.

CONTENTS

Features	2	Operation	7
Stereo System Composition	3	Tape Deck Connections	8
Installation Cautions	3	Using Tape Deck	8
Connection Diagram	4	Using AUX Jacks	9
Connections	5	Specifications	10
Front Panel Facilities	6	Conditions Frequently Mistaken for Malfunction	11
Before Operation	7		

STEREO SYSTEM COMPOSITION

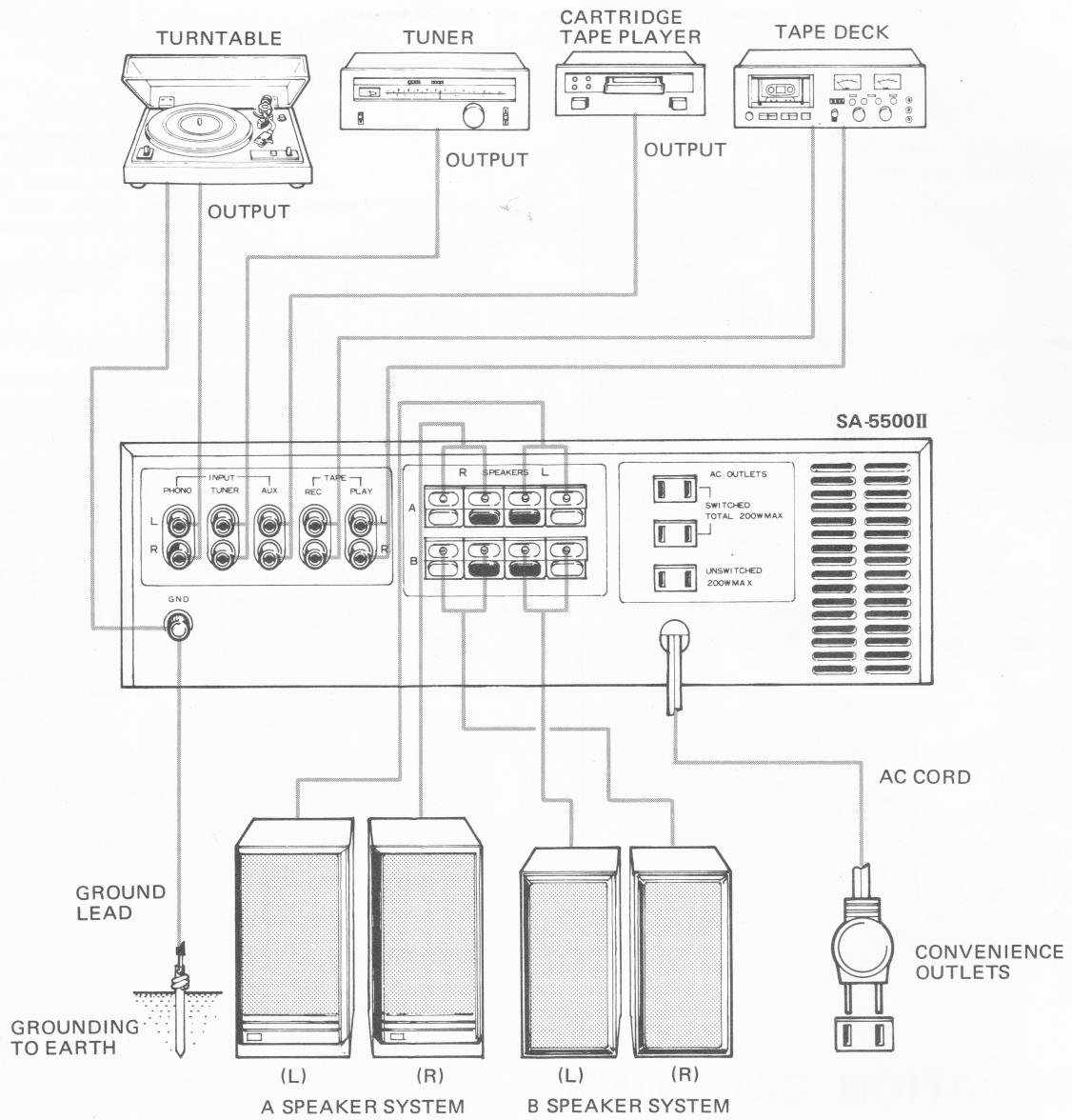


INSTALLATION CAUTIONS

In order to ensure long term top performance, do not install the SA-5500II in locations such as the following:

Locations to be avoided	Detrimental effects
<ul style="list-style-type: none"> • Direct sunlight, radiators or other sources of heat. • Poorly ventilated, humid or dusty locations. • Unstable supports that are not level or subject to vibration. • Locations where alcohols, insect spray or flammable material is used or stored. 	<ul style="list-style-type: none"> • Accumulated effects of internal and external heat can reduce thermal dissipation efficiency of power amplifier and lead to component deterioration. In some cases heating may also prevent stable operation. • Can cause faulty connection or corrosion of input and output terminals. Humidity and moisture in particular may reduce insulation performance and lead to current leakage or component overheating. • May adversely affect precision circuit components. Weight can also pose a hazard in regions subject to seismic activity. • In addition to fire hazard, some materials may contribute to corrosion or mar finish of equipment.

CONNECTION DIAGRAM



Connection Notes

- Rear panel jacks are provided in pairs, the upper jack for the left (L) channel and lower jack for the right (R) channel. When connecting components, use care to connect the channels properly (L to L and R to R).
- Insert connecting plugs fully. Loose connections can cause absence of sound or noise problems.

Convenience outlets (AC OUTLETS)

SWITCHED: Power to these outlets is coupled to the operation of the front panel POWER switch. By connecting the power cords of often used components (maximum total 200W) such as a tuner, the tuner power switch can be left in the on position. Power for the tuner will then be controlled by on-off operation of the SA-5500II POWER switch.

UNSWITCHED: Power is always supplied to this outlet (maximum total 200W) regardless of the front panel POWER switch position.

CONNECTIONS

SPEAKER SYSTEMS

Two sets of stereo speaker systems (A and B) can be connected to the SA-5500II. Normally employ the SPEAKERS A terminals when connecting only one set of speaker systems.

NOTE:

If two sets of speaker systems are used simultaneously, the impedance of each speaker system must be 8ohms or greater. Malfunction can be incurred if a speaker of less than 8ohms impedance is connected in this case.

As shown in Fig. 1, connect the right channel speaker (as viewed from listening position) to the R terminals and the left channel speaker to the L terminals. Observe plus (+: red) and minus (-: white) polarities of SPEAKERS terminals and the terminals on rear of speaker systems. Be sure to connect plus to plus and minus to minus.

Speaker Cord Connection

1. As shown in Fig. 2, strip about 10mm of the insulation from the end of the speaker cord. If the conductor is stranded, twist the strands together to prevent spreading.
2. While holding the terminal button depressed, insert the end of the cord into the terminal hole.
3. Release the button and confirm that cord is firmly clamped in terminal.

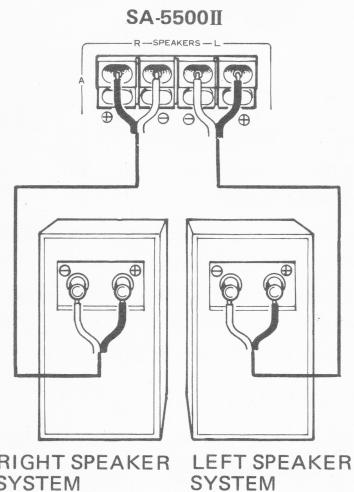


Fig. 1

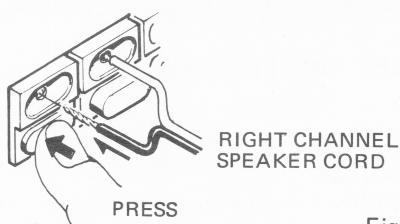


Fig. 2

TURNTABLE

Connect the output cord of a turntable equipped with a moving magnet (MM) type cartridge to the PHONO jacks. If the turntable is provided with a ground lead, connect this lead to the GND terminal on the rear of the SA-5500II.

NOTES:

- In addition to an MM type cartridge, an induced magnet (IM) type cartridge can be employed. In the case of a moving coil (MC) type cartridge, a special boosting transformer or head amplifier becomes required.
- Select turntable installation site carefully. If it is too close to the speakers or subject to vibration, feedback howling can occur, preventing use at high volumes.

TUNER

Connect the output of an AM/FM stereo tuner to the TUNER jacks.

AUX JACKS

Employ for connecting auxiliary source component (see page 9).

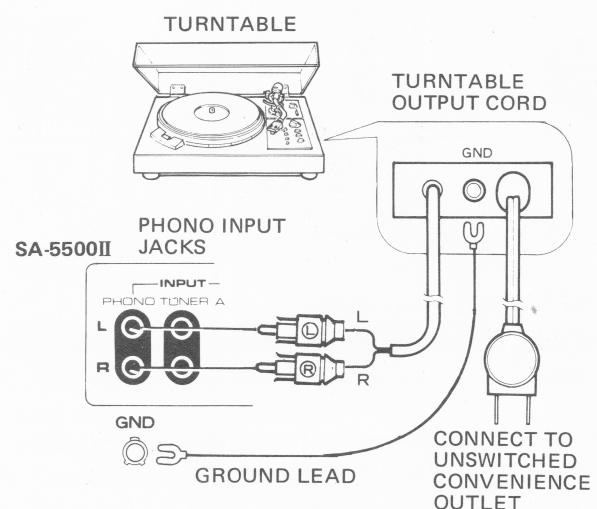


Fig. 3

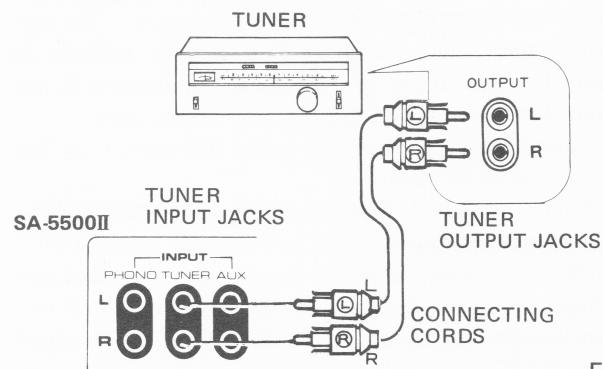


Fig. 4

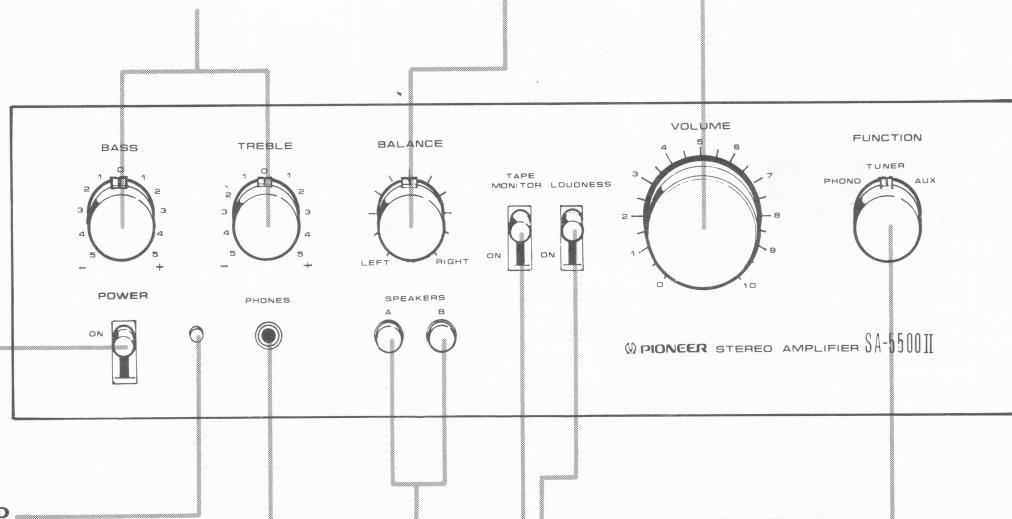
FRONT PANEL FACILITIES

POWER SWITCH

Set to ON position to energize SA-5500II. After setting to ON, there is a brief delay before sound is obtained. This is due to the operation of the muting circuit which prevents noise when the POWER is switched. This function does not indicate difficulty and normal operating condition is attained in a few seconds. The POWER switch also controls the rear panel SWITCHED convenience outlets.

BASS AND TREBLE CONTROLS

Controls for adjusting low and high frequency tone. Turn controls clockwise to enhance low or high frequencies and counterclockwise to attenuate their respective frequency ranges.



PILOT LAMP

PHONES JACK

When listening with stereo headphones, connect them to this jack.

NOTE:

Set SPEAKERS buttons to OFF (depressed position) when listening only with headphones.

SPEAKERS BUTTONS

Switch for selecting speaker systems connected to the rear panel. Sound from corresponding speaker systems is obtained when button is depressed, while sound is not obtained in the released position.

A: Sound obtained from speakers connected to the A speakers terminals.

B: Sound obtained from speakers connected to the B speakers terminals.

If both buttons are depressed simultaneously, sound will be obtained from both sets of speaker systems.

When listening with headphones, set SPEAKERS buttons to released (OFF) positions.

BALANCE CONTROL

Adjusts relative left and right channel volume balance between speaker systems and headphones. If the right channel volume is insufficient, turn the control clockwise from center. Conversely, if the left channel volume is insufficient, turn the control counter-clockwise from center.

VOLUME CONTROL

Adjusts volume from speakers and headphones. Clockwise rotation increases volume.

FUNCTION SWITCH

Selects desired playback program source.

PHONO: To play records on a turntable connected to the PHONO jacks.

TUNER: To listen to broadcasts with a tuner connected to the TUNER jacks.

AUX: To play a component connected to the AUX jacks.

LOUDNESS SWITCH

When listening at low volume settings, set switch to ON to enhance low frequencies. The response of the human ear to sound differs according to loudness. This switch compensates for this effect at low volumes.

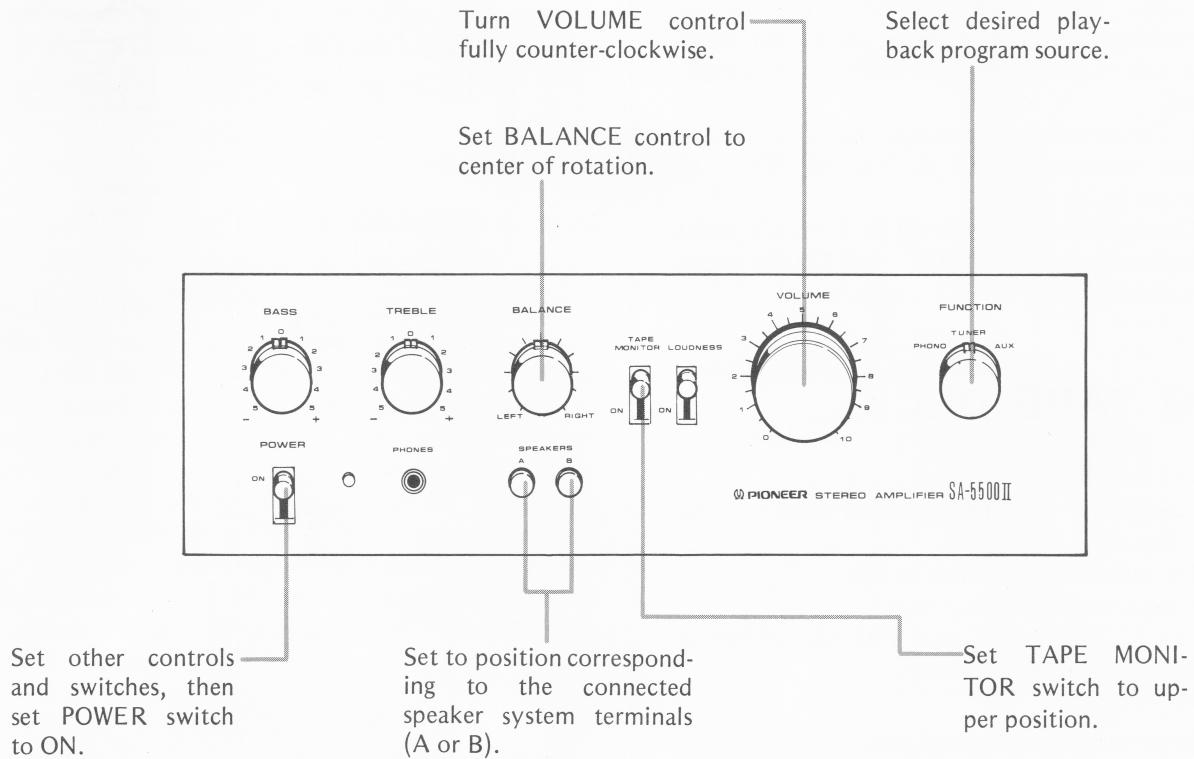
TAPE MONITOR SWITCH

Set to ON to play on a tape deck connected to the TAPE jacks or to monitor recording conditions.

NOTE:

Be sure to set switch to upper (OFF) position when playing records or listening to broadcasts.

BEFORE OPERATION



OPERATION

Before Playing Records

- When playing a record, be sure to lower the stylus gently onto the record surface. At this time, it is suggested to set the VOLUME control to minimum or SPEAKERS buttons to OFF in order to avoid a noise burst as the stylus contacts the record.
- Use care not to subject turntable to vibration while a record is being played. This can cause the stylus to jump the grooves and possibly damage the record. Also avoid turning off the power while the stylus is in contact with the record.

PLAYING RECORDS

1. Set FUNCTION switch to PHONO.
2. Operate turntable and play the record.
3. Adjust VOLUME, BASS and TREBLE controls for desired volume and tone.

EMPLOYING TUNER (AM OR FM RECEPTION)

Proper antenna installation is important for best signal reception with tuner.

1. Set FUNCTION switch to TUNER.
2. Operate tuner and tune in desired station.
3. Adjust VOLUME, BASS and TREBLE controls for desired volume and tone.

Protection Circuit

After setting the power switch to ON, there is a delay of about 2 seconds before sound is obtained from the speakers. This is due to the muting circuit which functions to prevent annoying surge noise when the power supply is operated.

TAPE DECK CONNECTIONS

The SA-5500II can be connected to a stereo tape deck (reel-to-reel, cassette) for recording and playback. Use tape deck accessory connecting cords to connect the jacks as follows. Upper jacks are for the left (L) channel and lower for the right (R) channel.

Recording Connections: Connect the TAPE REC jacks to the recording input (LINE INPUT) jacks of the tape deck.

Playback Connections: Connect TAPE PLAY jacks to the playback output (LINE OUTPUT) jacks of the tape deck.

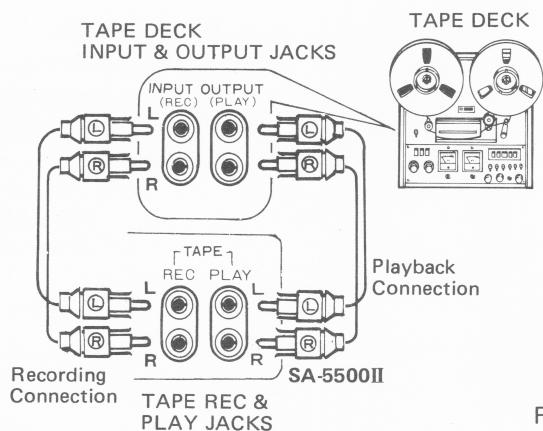


Fig. 5

USING TAPE DECK

TAPE PLAYBACK

Steps for playback of a prerecorded tape on the tape deck (Fig. 6).

1. Set TAPE MONITOR switch to ON.
2. Operate tape deck and play tape.
3. Adjust VOLUME, BASS and TREBLE controls for the desired volume and tone.

NOTES:

1. Be sure to return the TAPE MONITOR switch to the upper position when not playing tape.
2. Tape playback is unaffected by the position of the FUNCTION switch.

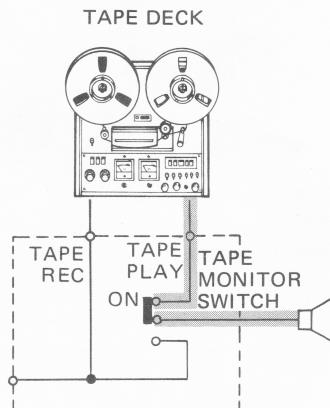


Fig. 6

TAPE RECORDING

A program source (records, FM broadcasts, etc.) can be recorded with tape deck (Fig. 7).

1. Set FUNCTION switch to the source to be recorded (PHONO, TUNER, etc.)
2. Operate program source.
3. Adjust recording levels with the controls of the tape deck and proceed with recording.

Monitoring Recording Conditions

If the tape deck is equipped with monitoring facilities (3 heads), recording conditions can be monitored from the speakers by setting the TAPE MONITOR switch to ON. Both recording and playback connections must be completed in this case.

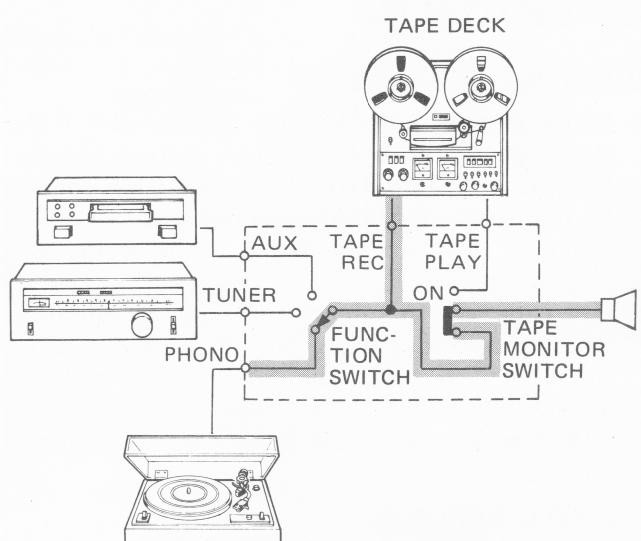


Fig. 7

USING AUX JACKS

A source component, such as 8-track cartridge tape player, TV sound tuner, a second stereo tuner or the playback outputs of a second tape deck, can be connected to these jacks (Fig. 8).

OPERATION

1. Set FUNCTION switch to AUX.
2. Operate component connected to the AUX jacks.
3. Adjust VOLUME, BASS and TREBLE controls for desired volume and tone.

Tape Duplication Using AUX Jacks

If two tape decks are available, the playback output (LINE OUTPUT) jacks of the second deck can be connected to the AUX jacks, as shown in Fig. 9. Duplication and editing of previously recorded tapes can then be performed. Recordings of FM broadcasts and other sources can be edited by transferring only the desired portions to a second tape. A personalized tape library can be composed in this manner. Another application is transferring recordings from reel-to-reel to conveniently handled cassettes.

1. Connect two tape decks as shown in Fig. 9.
2. Set FUNCTION switch to AUX.
3. Play the prerecorded tape on the deck connected to the AUX jacks and perform recording with the deck connected to the TAPE jacks.

NOTE:

Recording monitoring can only be performed with a tape deck specially equipped for this function (3 heads). Normally it cannot be performed with 2 head type reel-to-reel decks or cassette decks, even if the TAPE MONITOR switch is set to ON. By setting this switch to the upper (OFF) position in this case, however, playback sound conditions may be heard.

SUGGESTIONS FOR BETTER RECORDINGS

Conditions external to the tape deck play an important role in the quality of a recording. Check the following points before proceeding with the recording.

Inspect Connections

Check that connections are correct and secure. Improper or loose connections can produce noisy recordings.

Use an Outdoor FM Antenna

Tune in an FM station several minutes before the start of the desired program in order to allow the tuner time to warm up and stabilize. A properly

CARTRIDGE TAPE PLAYER

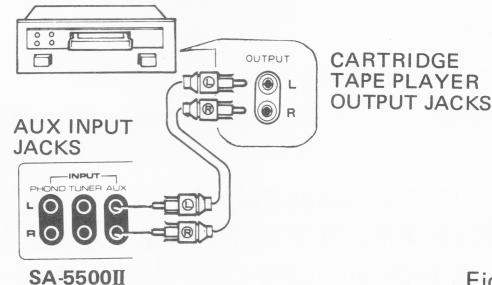
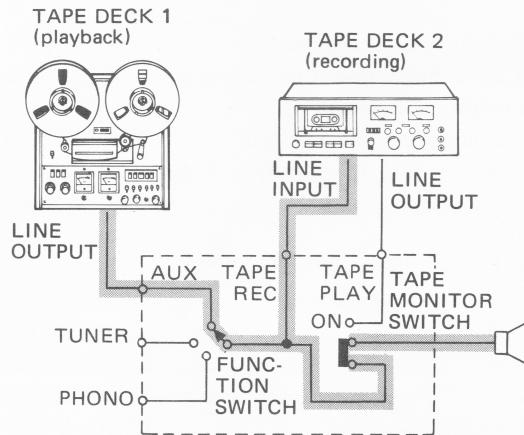


Fig. 8

Connections for Tape Duplication



Recording conditions can be monitored by operating TAPE MONITOR switch.

Fig. 9

installed outdoor FM antenna is recommended for better results.

Clean Records and Stylus

Be sure to use a good quality record cleaner to clean the records and a soft stylus brush to clean the stylus before recording.

Separate from Noise Sources

Note carefully possible causes of noise external to the recording equipment. These include such items as buzzers, electric shavers, hair dryers, refrigerator thermostats and similar electrical noise sources. Avoid using such appliances while recording is in progress.

SPECIFICATIONS

Semiconductors

ICs	2
Transistors	7
Diodes	7

Amplifier Section

Circuitry	2-stage differential amplifier direct-coupled OCL
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Continuous power output is 15 watts* per channel, min. RMS, at 8 ohms from 20Hertz to 20,000 Hertz with no more than 0.5% total harmonic distortion.

Total Harmonic Distortion at 20Hertz to 20,000Hertz from AUX

Continuous rated power output	0.5%
1watt per channel power output, 8ohms	0.1%

Intermodulation Distortion

Continuous rated power output	0.5%
1watt per channel power output, 8ohms	0.1%

Speaker A, B, A + B

Headphones Low impedance

Damping Factor (20Hertz to 20,000Hertz, 8ohms) 30

Input (Sensitivity/Impedance)

PHONO	2.5mV/50kohms
TUNER	150mV/50kohms

AUX	150mV/50kohms
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TAPE PLAY	150mV/50kohms
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PHONO Overload Level (T.H.D.: 0.3%) 130mV (1kHz)

Output (Level/Impedance)

TAPE REC	150mV
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Frequency Response

PHONO (RIAA Equalization)	20Hz to 20,000Hz ±0.5dB
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TUNER, AUX, TAPE PLAY	20Hz to 20,000Hz ±1dB
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Tone Control

BASS	±7dB (100Hz)
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TREBLE	±7dB (10kHz)
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Loudness Contour

(Volume control set at -40dB position)	..+6dB (100Hz)
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Hum and Noise (IHF, short-circuited, A network, rated power)

PHONO	71dB
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TUNER, AUX, TAPE PLAY	87dB
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Miscellaneous

Power Requirements 120V 60Hz only.

Power Consumption 70W (UL)
100VA (CSA), 130W (Max.)

Dimensions 380(W) x 124(H) x 269(D) mm
14-15/16 x 4-7/8 x 10-9/16 in

Weight Without Package; 5.2kg (11lb 7 oz)
With Package; 5.9kg (13lb)

Furnished Parts

Operating Instructions 1

* Measured pursuant to Federal Trade Commission's Trade Regulation rule on Power Claims for Amplifier.

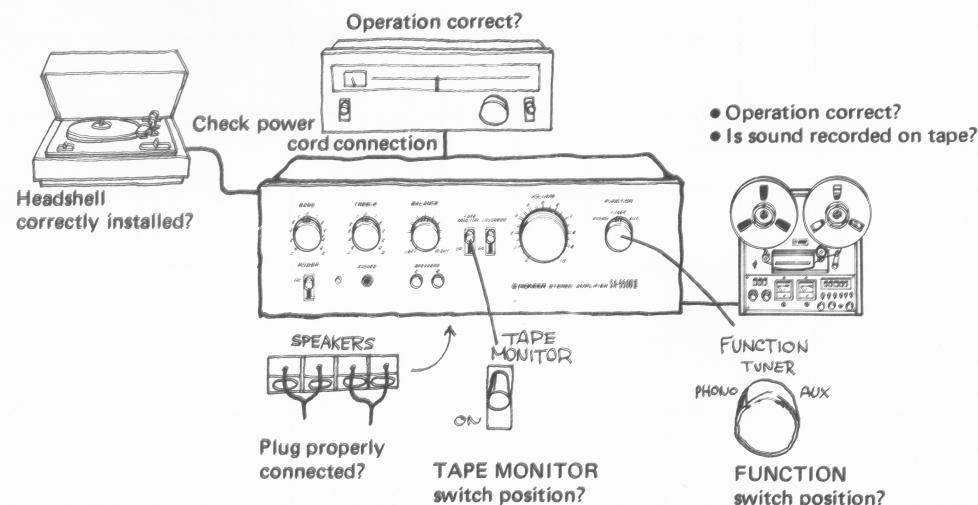
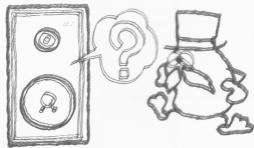
NOTE:

Specifications and the design subject to possible modification without notice due to improvements.

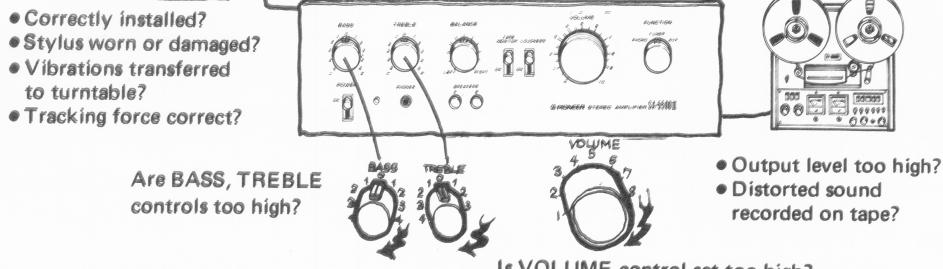
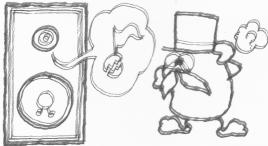
CONDITIONS FREQUENTLY MISTAKEN FOR MALFUNCTION

Most cases of operating difficulty can be attributed to simple causes, such as faulty connections or incorrect operation. If the problem cannot be corrected with reference to the following chart, turn off the power and contact your nearest Pioneer Authorized Service Center.

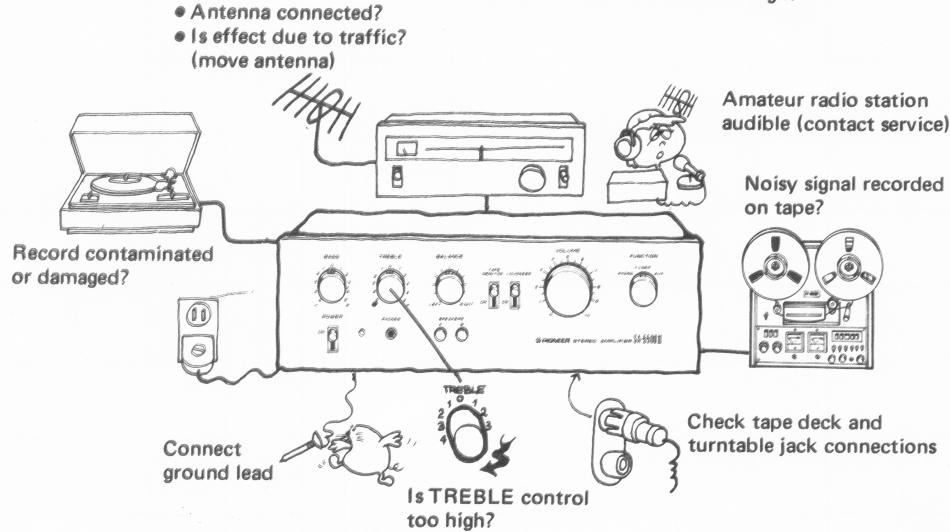
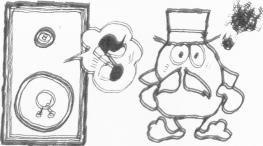
Sound not obtained



Sound distorted



Excessive noise



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STEREO AMPLIFIER

SA-5500II KC

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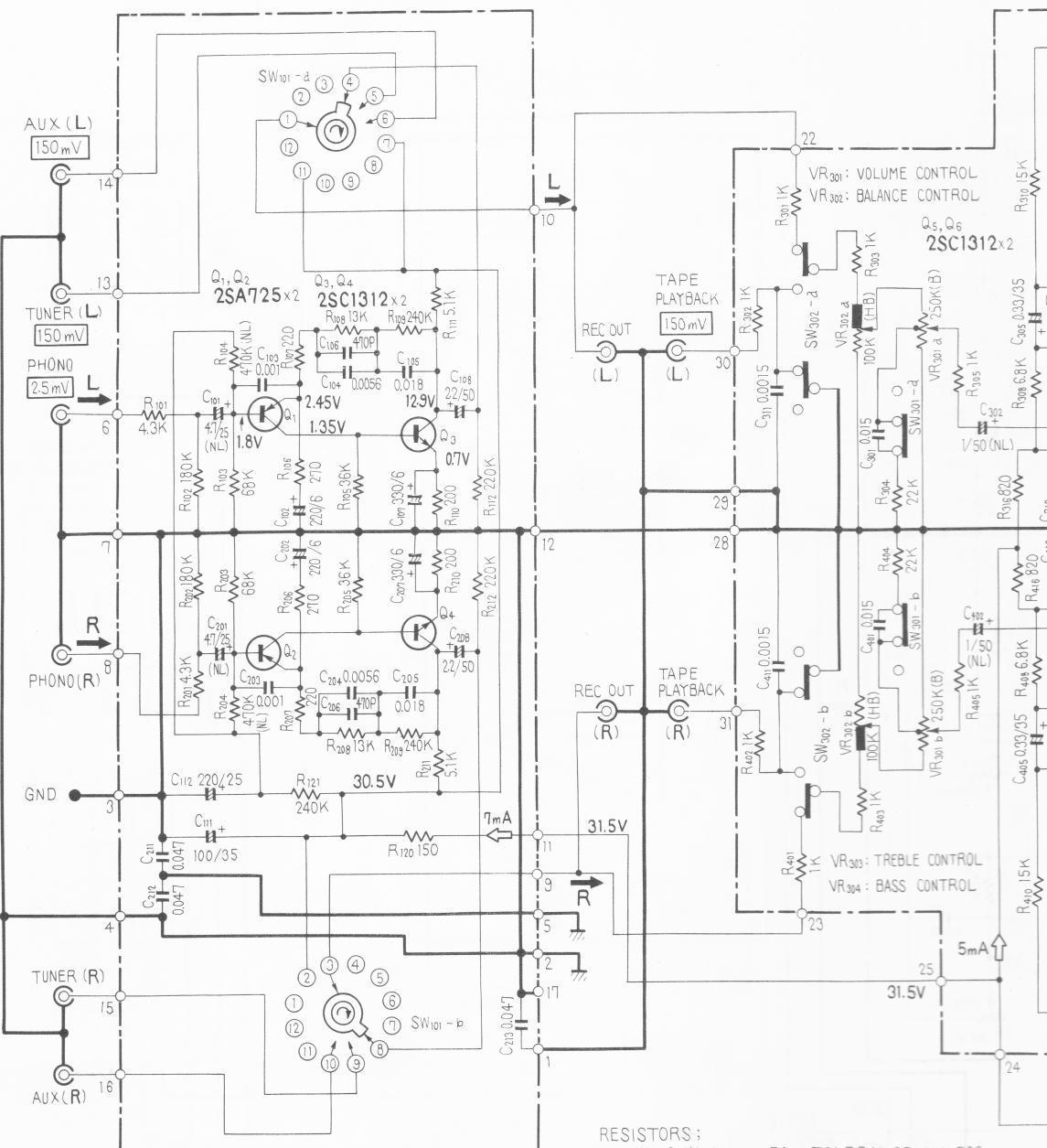
B

C

D

E

EQUALIZER AMP ASS'Y GWF - 104



RESISTORS:

IN OHM 1/4W $\pm 5\%$ TOLERANCE UNLESS
OTHERWISE NOTED K: k Ω M: m Ω

CAPACITORS:

IN μ F UNLESS OTHERWISE NOTED P: pF

SWITCHES:

S₁: POWER
ON — OFF

SW₃₀₂: TAPE MONITOR
ON — OFF

SW₁₀₁: FUNCTION

1. PHONO
2. TUNER
3. AUX

SW₃₀₁: SPEAKER

- a. ON — OFF
- b. ON — OFF

SW₃₀₁: LOUDNESS

ON — OFF

NOTES

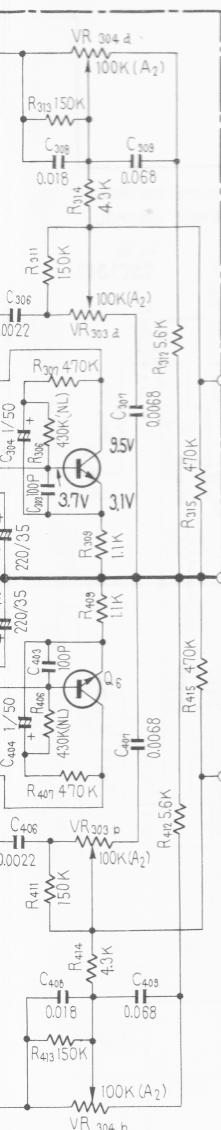
mV: SIGNAL VOLTAGE, AT 15W \times 2 8 Ω OUTPUT
V: DC VOLTAGE AT NO INPUT SIGNAL
(V): DC VOLTAGE AT MAX POWER OUTPUT
mA: DC CURRENT AT NO INPUT SIGNAL

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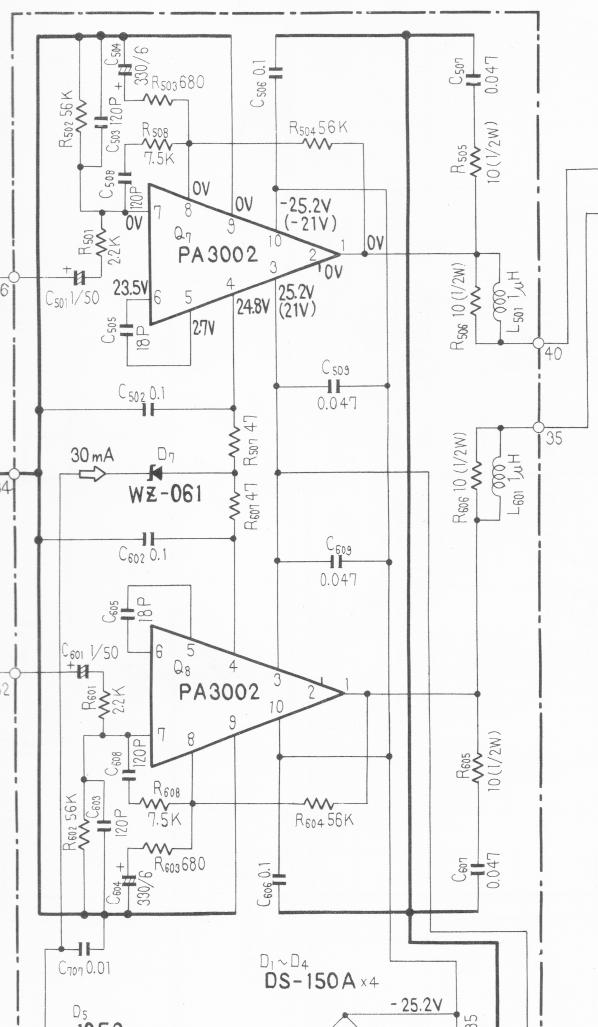
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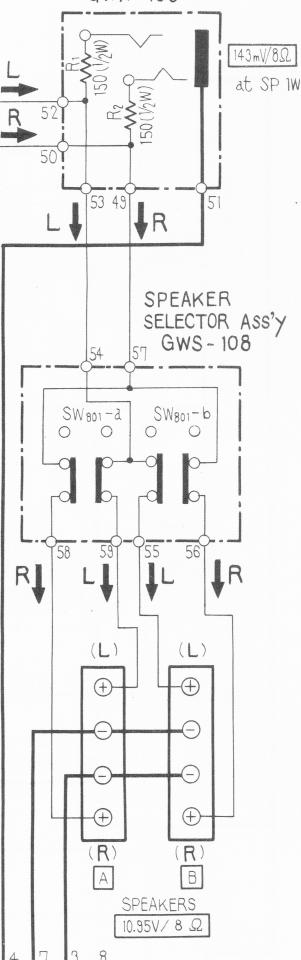
TONE AMP Ass'y
GWG - 104



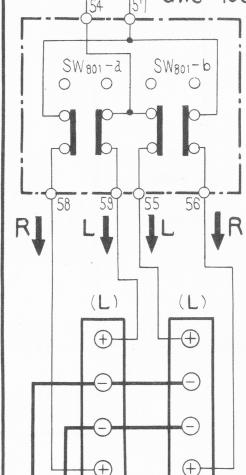
POWER AMP Ass'y
GWH - 104



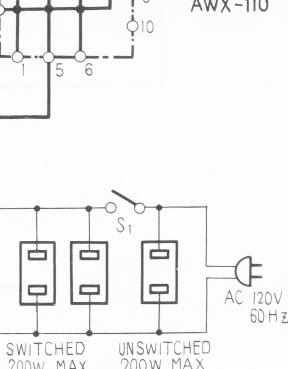
HEADPHONES Ass'y
GWX-108



SPEAKER
ELECTOR ASS'Y
GWS - 108



RS
-Ω



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STEREO AMPLIFIER

SA-5500II KU

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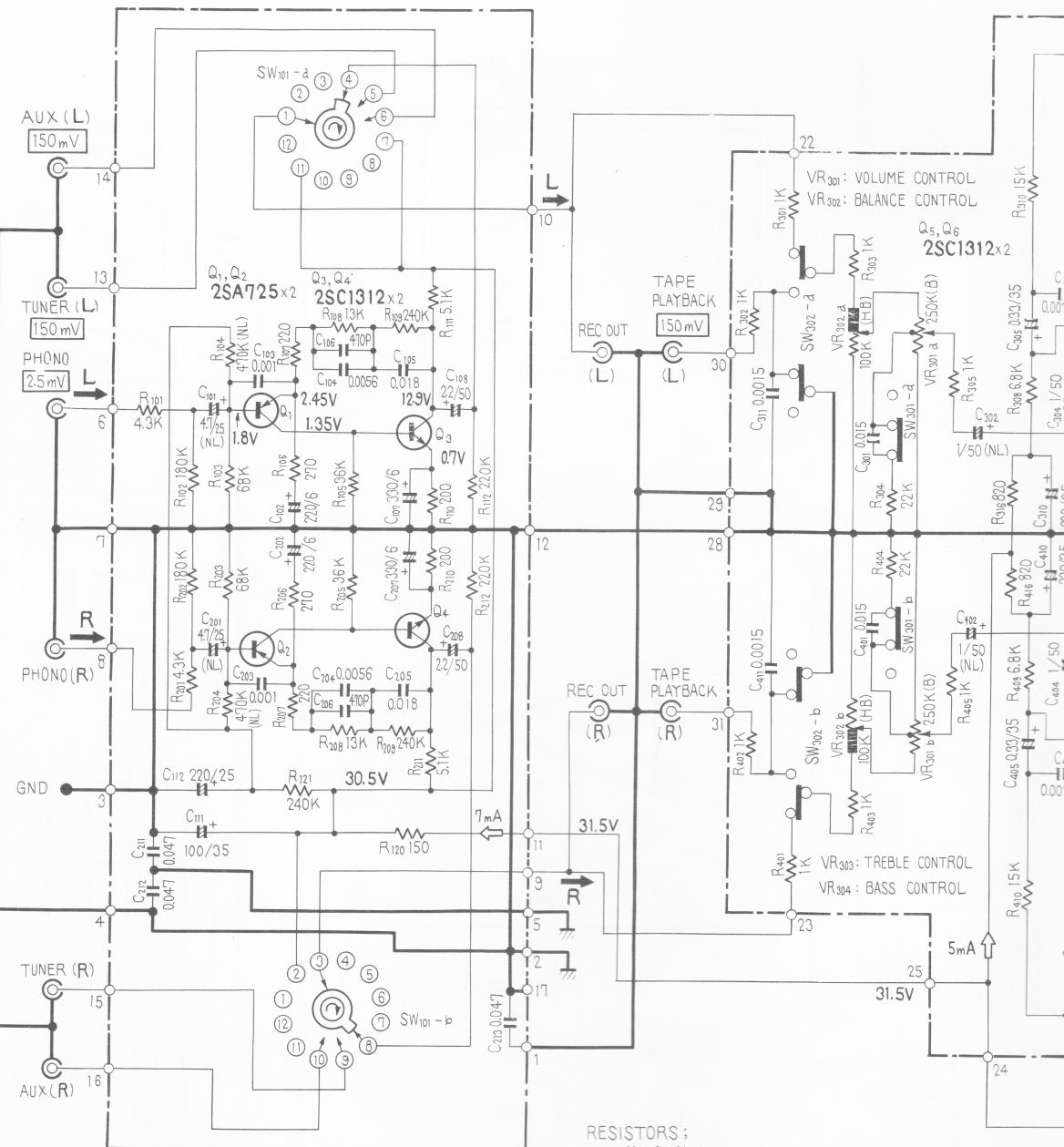
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EQUALIZER AMP ASS'Y
GWF-103



RESISTORS ;

IN OHM 1/4W \pm 5% TOLERANCE UNLESS
OTHERWISE NOTED K:K Ω M:M Ω

CAPACITORS :

IN μ F UNLESS OTHERWISE NOTED P : pF

SWITCHES;
S₁: POWER
ON — OFF

SW₃₀₂: TAPE MONITOR
ON — OFF

SW₁₀₁: FUNCTION
1. PHONO
2. TUNER
3. AUX

SW₈₀₁ : SPEAKER
a. ON — OFF
b. ON — OFF

NOTES

mV : SIGNAL VOLTAGE AT $15W \times 2$ 8Ω OUTPUT
V : DC VOLTAGE AT NO INPUT SIGNAL
(V) : DC VOLTAGE AT MAX POWER OUTPUT
mA : DC CURRENT AT NO INPUT SIGNAL

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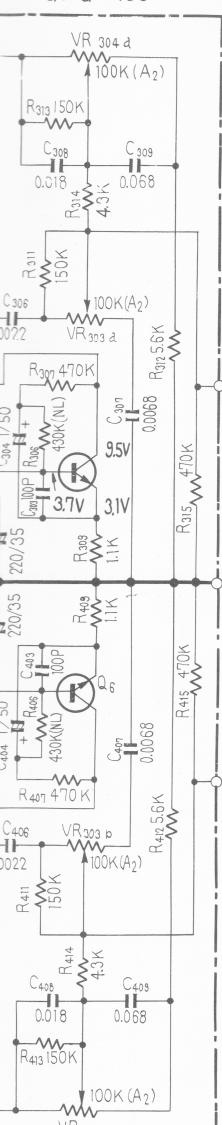
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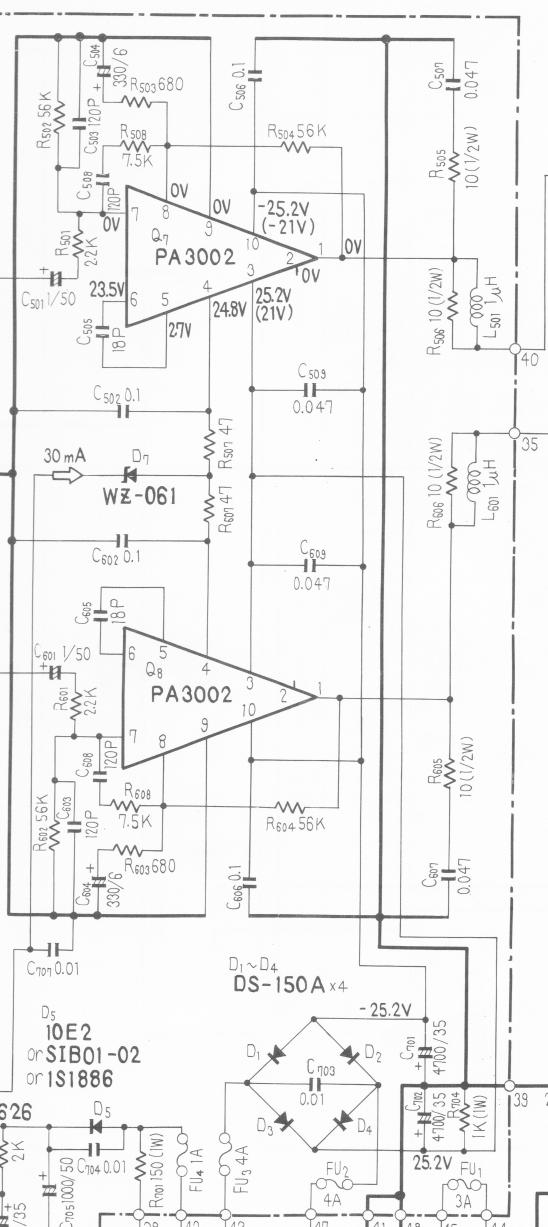
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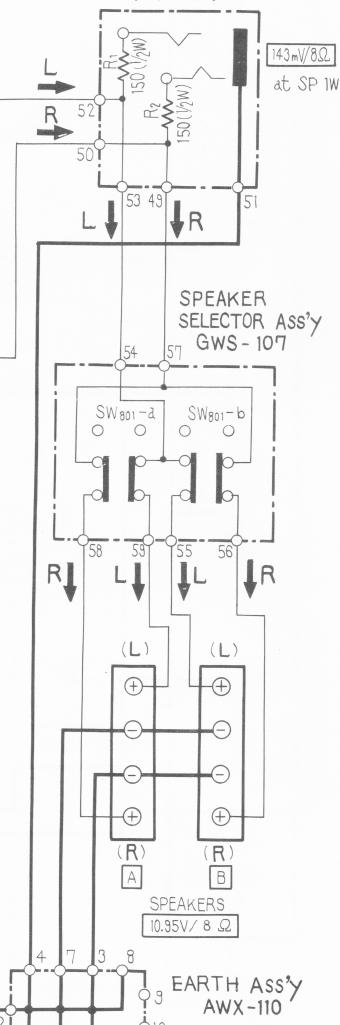
TONE AMP Ass'y
GWG - 103



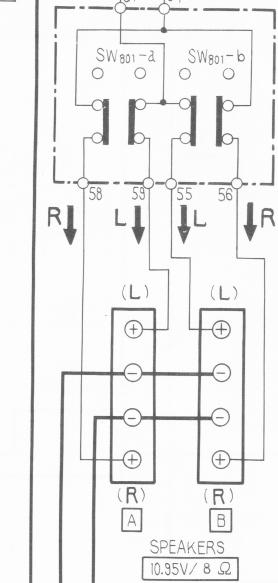
POWER AMP Ass'y
GWH - 103



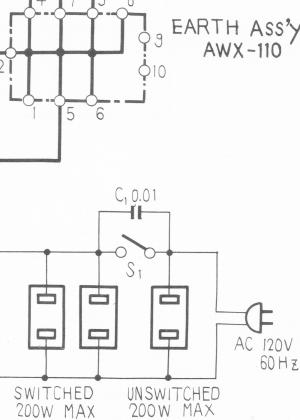
HEADPHONES ASS'Y
GWX-107



SPEAKER SELECTOR ASS'Y
GWS-107



SPEAKERS
10.95V/ 8 Ω



EARTH Ass'y
AWX-110